



COLUMBIA UNIVERSITY

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Dear Faculty,

This month we have a very full report on the remarkable contributions made at the Scientific Sessions of International Society for Heart and Lung Transplantation. The presentations and papers below reflect the tireless dedication of our heart failure team and also highlight the robust collaboration between its surgical and medical members.

Please continue to email Paul Kurlansky (pk2245@columbia.edu) or me (crs2@cumc.columbia.edu) with regular updates on your grants, publications, and presentations by the first of every month.

Remember that journal links below require a subscription or connection through the Columbia University library e-journal system, while PubMed links are accessible to all.

For easy reference, we now post all issues of this [newsletter](#) on the Center for Innovations and Outcomes Research website.

Craig R. Smith, MD
Chair, Department of Surgery

CONGRATULATIONS

Dr. David Kalfa received a \$75,000 grant from the Babies Heart Fund to support his innovative work on tissue engineering to advance the treatment of congenital heart disease. He was also invited to serve on the editorial board of the *World Journal for Pediatric and Congenital Heart Surgery*.

CARDIAC SURGERY

Presentations

*American Transplant Congress
Chicago, May 1, 2017*

Is the Current Heart Allocation System Just and Fair for Blood Type O Recipients? Propensity-Matched Analysis of 34353 Patients in the UNOS Registry, M. Ando, K. Takeda, P.A. Kurlansky, M. Wright, C.L. Lee, J. Han, A.R. Garan, V.K. Topkara, M. Yuzefpolskaya, P.C. Colombo, M. Farr, Y. Naka, H. Takayama.

*International Society of Heart and Lung Transplantation
37th Annual Meeting and Scientific Sessions
San Diego, April 5-7, 2017*

Severe PGD and Post-Operative Vasoplegia: Complications on the Same Spectrum or Different Entities? H. Takayama.

Gastro-Intestinal Dysmotility in Thoracic Organ Transplantation Revisited: Importance, Evaluation, Treatment, F. D'Ovidio.

The Impact of Age, Sex, Therapeutic Intent and Severity of Advanced Heart Failure on Outcomes in the Multicenter Study of Maglev Technology in Patients Undergoing Mechanical Circulatory Support Therapy with Heartmate 3 (Momentum 3) Pivotal Trial, D. Goldstein, M. R. Mehra, Y. Naka, C.T. Salerno, N. Uriel, D. Dean, A. Itoh, F. D. Pagani, E. R. Skipper, G. Bhat, N. Raval, B.A. Bruckner, J. Estep, R. Cogswell, C.A. Milano, L. Fendelander, J. B. O'Connell, J. Cleveland.

Is There a Rationale for an "Old-for-Old" Program in Lung Transplantation? A Comparative Study Using the International Society of Heart and Lung Transplantation Database, A.M. Bernhardt, A.P. Levin, J. Stehlik, C. Benden, L. Edwards, F.M. Wagner, H. Reichenspurner.

Outcomes of Multiple Concomitant Valve Procedures in Patients Receiving Continuous-Flow Left Ventricular Assist Device J. Han, H. Takayama, P.A. Kurlansky, A.R. Garan, M. Yuzefpolskaya, V.K. Topkara, P.C. Colombo, Y. Naka, K. Takeda.

Successful Use of Temporary Percutaneous Right Ventricular Assist Devices in Acute Right Ventricular Failure After Acute Myocardial Infarction or LVAD Implantation, E. Coromilas, K. Takeda, A. Kirtane, V. K. Topkara, H. Takayama, M. Yuzefpolskaya, D. Karpaliotis, Y. Naka, P. C. Colombo, A.R. Garan.

Mechanical Circulatory Support for Patients in Cardiogenic Shock After Right Ventricular Infarction: A Single-Center Experience, K. Patel, K. Takeda, L. Truby, C. Eckhardt, K. Ross, D. Karpaliotis, Y. Naka, V.K. Topkara, M. Yuzefpolskaya, P.C. Colombo, A. Kirtane, H. Takayama, A.R. Garan.

Minimally Invasive versus Sternotomy Approach for Centrimag Biventricular Support in Refractory Cardiogenic Shock, K. Takeda, A.R. Garan, V.K. Topkara, J. Han, P. Kurlansky, M. Yuzefpolskaya, M.A. Farr, P.C. Colombo, Y. Naka, H. Takayama.

Genotype Guided Warfarin Protocol Improves Anticoagulation Quality Early After LVAD Implantation, D.L. Jennings, M. Yuzefpolskaya, A.R. Garan, A. Eisenberger, K. Takeda, H. Takayama, Y. Naka, P. Colombo, V. Topkara.

Quality of Life and Functional Capacity Assessment in the Multicenter Study of Maglev Technology in Patients Undergoing Mechanical Circulatory Support Therapy with Heartmate 3 (Momentum 3) Pivotal Trial, J.A. Cowger, Y. Naka, K. Aaronson, D. Horstmannshoff, S. Gulati, D. Rinde-Hoffman, S. Pinney, S. Adatya, D.J. Farrar, U.P. Jorde.

Advanced Theranostics in Ex-Vivo Lung Bioengineering, B.A. Guenthart, J.D. O'Neill, J. Kim, G. Vunjak-Novakovic, M.

Hypoxia Inducible Factor 1 Alpha Mediates Apoptotic Cell Death in the DCD Heart Following Prolonged Exposure to Warm Ischemia, A.A. Ali, P. Downey, A. Zalewski, K.J. Clerkin, I. George, P.C. Colombo, S. Messer, S.R. Large, Z.A. Ali.

Extending the Boundaries of DCD Heart Transplantation: Improved Functional Recovery of DCD Hearts Exposed to Prolonged Warm Ischemia by Inhibition of Histone Deacetylase, A.A. Ali, P. Downey, A. Zalewski, K.J. Clerkin, I. George, P.C. Colombo, S. Messer, S. Large, Z.A. Ali.

Impact of Center Volume on Bridging to Transplantation with Contemporary Left Ventricular Assist Devices, L.K. Truby, R. Givens, A.R. Garan, R.A. Blum, A. Clemons, R. Te-Frey, M. Yuzefpolskaya, F. Latif, S. Restaino, H. Takayama, K. Takeda, D.M. Mancini, M. Farr, Y. Naka, P.C. Colombo, V.K. Topkara.

Circadian Variation of Blood Pressure and Hemodynamics in Outpatients with Heart Mate II, F. Castagna¹, A. Pinsino, E. J. Stöhr, B. McDonnell, M. Yuzefpolskaya, M. Flannery, D.L. Brunjes, N. Akter, R.T. TeFrey, M. F. Pineda, E. Royzman, V.K. Topkara, A.R. Garan, H. Takayama, K. Takeda, Y. Naka, J. Cockcroft, P.C. Colombo.

Prolonged Support Is Associated with Increased Risk of Cellular Rejection in Patient's Bridged to Transplantation with Continuous Flow Left Ventricular Assist Devices, L.K. Truby, A.R. Garan, R. Givens, M. Yuzefpolskaya, A. Clemons, R.A. Blum, H. Takayama, K. Takeda, F. Latif, S. Restaino, M. Maurer, D. M. Mancini, Y. Naka, M. Farr, P.C. Colombo, V.K. Topkara.

Bridging to Transplantation with Contemporary Continuous-Flow Left Ventricular Assist Devices: A Decade Experience, L.K. Truby, R. Givens, A.R. Garan, M. Yuzefpolskaya, M. Flannery, H. Takayama, K. Takeda, J. Haythe, F. Latif, S. Restaino, M. Maurer, D.M. Mancini, Y. Naka, M. Farr, P.C. Colombo, V.K. Topkara.

Effects of Hospital Characteristics on In-Hospital Mortality and Hospitalization Costs for Mechanical Circulatory Support Device (MCSD) Therapy: Results from the National (Nationwide) Inpatient Sample (NIS), L. Sridharan, R. Givens, A.R. Garan, M. Yuzefpolskaya, K. Takeda, F. Latif, S. Restaino, J. Haythe, M. Maurer, D.M. Mancini, M. Farr, Y. Naka, P.C. Colombo, V.K. Topkara.

Endoscopic Evaluation in Patients with CF-LVADs with Gastrointestinal Bleeding: Are We Ready for a Paradigm Shift to Improve Care? J. Axelrad, A. Pinsino, C. Brooks, P. Trinh, B. Cagliostro, F. Castagna, V.K. Topkara, A.R. Garan, L.A. Effner, H. Takayama, K. Takeda, Y. Naka, P.C. Colombo, M. Yuzefpolskaya, T. Gonda.

Trends in Simultaneous Heart-Kidney Transplantation: An Analysis of UNOS/OPTN

Data from 2000 to 2015, R.C. Givens, V.K. Topkara, S.W. Restaino, F. Latif, Y. Naka, H. Takayama, K. Takeda, P.C. Colombo, M.A. Farr.

The New Heart Allocation System: Implications on Patients with Restrictive Cardiomyopathy in the UNOS Registry, L. Sridharan, R. Givens, K. Takeda, A.R. Garan, M. Yuzefpolskaya, F. Latif, S. Restaino, J. Haythe, J. Ginns, D. Mancini, Y. Naka, P. Colombo, M. Maurer, H. Takayama, V.K. Topkara.

Hemodynamic Effects and Clinical Response to Intra-Aortic Balloon Pump in Chronic Heart Failure Patients with Cardiogenic Shock, J. Fried, A. Nair, V.K. Topkara, A. Masoumi, K. Clerkin, P.C. Colombo, M. Yuzefpolskaya, K. Takeda, H. Takayama, Y. Naka, A.R. Garan.

Contemporary ECMO Therapy for Postcardiotomy Shock: From REgiStry for Cardiogenic Shock: Utility and Efficacy of Device Therapy (RESCUE), H. Takayama, J. Han, M. Baltazar-Garcia, M. Lucas, M. Kai, M. Camacho, B. Sun, D. Ranney, M.A. Daneshmand, A. Itoh.

Vasoactive-Inotropic Score Is Associated with In-Hospital Mortality in Continuous Flow Left Ventricular Assist Device Patients, J. Han, H. Takayama, P.A. Kurlansky, A.R. Garan, M. Yuzefpolskaya, V.K. Topkara, P.C. Colombo, Y. Naka, K. Takeda.

Extended Donation After Circulatory Death (DCD) Cat 3 Lung Donor Agonal and Post-Mortem Warm Ischemic Times (WIT) Do Not Affect Early Mortality, B. Levvey, L. Edwards, A. Robinson, S. Keshavjee, M. Erasmus, A. Glanville, P. Hopkins, M. Musk, A. Patterson, M. Hertz, F. D'Ovidio, K. McCurry, P. Camp, B. Carrico, J. Stehlik, D. Van Raemdonck, G. Snell.

Attenuation of Cardiac Allograft Vasculopathy in Dual Organ Transplantation, K.J. Clerkin, S.W. Restaino, F. Latif, M.A. Farr, E. Zorn, D.M. Mancini, K. Takeda, H. Takayama, Y. Naka, P.C. Colombo, V.K. Topkara.

The Impact of Blood Pressure Control on the Development of Left Ventricular Distension with VAECMO: A Comparison of Vasodilation vs. Diuresis, J. Han, H. Takayama, D. Burkhoff, M.L. Dickstein.

Novel Palliative Care Integration Program increases Days Alive and Out of Hospital and Reduces Inpatient Direct Costs Among Left Ventricular Assist Device Patients, S. Nakagawa, J.M. Luna, V.K. Topkara, M. Yuzefpolskaya, D. Vawdrey, A.R. Garan, H. Takayama, K. Takeda, P.C. Colombo, Y. Naka, C.D. Blinderman.

Cardiac Resynchronization Therapy Reduces Mortality and Cardiovascular Readmissions in Left Ventricular Assist Device Recipients, A.R. Garan, X. Mai, V.K. Topkara, K. Takeda, K.J. Clerkin, R. Demmer, M. Yuzefpolskaya, H. Takayama, Y. Naka, J. Chyou, H.M. Spotnitz, N. Uriel, J. Dizon, P.C. Colombo.

Comparison of Survival and Modes of Death by ICD Status Among LVAD Recipients, X. Mai, K. Clerkin, V.K. Topkara, K. Takeda, R. Demmer, M. Yuzefpolskaya, M. Tiburcio, H. Takayama, Y. Naka, H.M. Spotnitz, J. Dizon, P.C. Colombo, A.R. Garan.

How Old Is Too Old? The Influence of Advanced Age on VA-ECMO Outcomes, M. Salna, K. Takeda, P. Kurlansky, H. Ikegami, J. Han, S. Stein, V. Topkara, M.

Yuzefpolskaya, P.C. Colombo, Y. Naka, A.R. Garan, H. Takayama.

Is the ISHLT-Suggested Inotrope Score a Predictor of In-Hospital Mortality After Heart Transplantation? M. Wright, K. Takeda, C. Mauro, P. Kurlansky, J. Han, L. Truby, M. Salna, V. Topkara, A.R. Garan, M. Yuzefpolskaya, P. Colombo, Y. Naka, M. Farr, H. Takayama.

Bridge-to-Transplant LVAD or Primary Heart Transplantation in Young Patients? Both Offer Similar MidTerm Survival M. James, K. Takeda, P. Kurlansky, M. Ando, C. Lee, J. Han, M. Wright, V. Topkara, A.R. Garan, M. Yuzefpolskaya, M. Farr, P. Colombo, Y. Naka, H. Takayama.

VA ECMO as a Bridge to Transplantation: Emergent Eligibility and Outcomes, M.V. Habal, A.R. Garan, V.K. Topkara, K. Takeda, F. Latif, S. Restaino, M. Yuzefpolskaya, R. Bijou, P. Colombo, H. Takayama, Y. Naka, M. Farr.

Pulmonary Vascular Resistance Is Not an Independent Predictor of Post-Transplant Outcome in Bridge-to Transplant Patients; It's Time to Re-Evaluate Our Current Heart Transplant Eligibility, M. Ando, K. Takeda, P.A. Kurlansky, M. Wright, C. Lee, J. Han, A.R. Garan, V.K. Topkara, M. Yuzefpolskaya, P.C. Colombo, M. Farr, Y. Naka, H. Takayama.

Use of Pre-Device Exchange Computed Tomography Angiography for Left Ventricular Assist Device Thrombosis, S.N. Yu, J. Han, K. Takeda, J.N. Ginns, P.A. Kurlansky, A.R. Garan, M. Yuzefpolskaya, V.K. Topkara, P.C. Colombo, Y. Naka, H. Takayama.

Medical Management of Device Thrombosis in Continuous-Flow Left Ventricular Assist Device Patients: Success Rate and Outcomes, E. Coromilas, R. Garan, M. Yuzefpolskaya, H. Takayama, K. Takeda, M. Farr, Y. Naka, P.C. Colombo, V.K. Topkara.

Prospective Evaluation of Urine Dipstick for Detection of Moderate and Severe Hemolysis in Outpatients on CF-LVAD Support, M.V. Gavalas, A. Breskin, P.N. Trinh, H. Rosenblum, M. Yuzefpolskaya, A. Eisenberger, A.R. Garan, A. Pinsino, B. Cagliostro, M. Flannery, H. Takayama, K. Takeda, Y. Naka, V.K. Topkara, P.C. Colombo.

Use of an Investigational Left Ventricular Assist Device Through a Left Thoracotomy Approach in a Patient with Complex Congenital Heart Disease, H. Ilias Basha, K. Takeda, H. Takayama, J. Ginns, N. Persaud, M.F. Pineda, M. Flannery, V.K. Topkara, M. Yuzefpolskaya, P.C. Colombo, Y. Naka, A.R. Garan.

Mechanical Circulatory Support Devices (MSCD) Therapy in the Era of the Affordable Care Act (ACA): National Trends in Hospitalization Costs and In-Hospital Mortality, L. Sridharan, R. Givens, A. R. Garan, M. Yuzefpolskaya, K. Takeda, H. Takayama, F. Latif, J. Haythe, S. Restaino, M. Maurer, D. Mancini, M.J. Farr, Y. Naka, P. Colombo, V.K. Topkara.

Variability in Gene Expression Profiling (GEP) Identifies Heart Transplant Recipients at Risk for Acute Cellular Rejection but Not Cardiac Allograft Vasculopathy, L.K.

Truby, A.R. Garan, R. Givens, K. Takeda, H. Takayama, M. Yuzefpolskaya, S. Restaino, E. Zorn, D. Mancini, P.C. Colombo, Y. Naka, M. Farr, F. Latif, V.K. Topkara.

Predictors of Ventricular Recovery After Acute Myocardial Infarction Complicated by Cardiogenic Shock; C. Eckhardt, K. Takeda, H. Takayama, V.K. Topkara, A. Masoumi, J. Fried, K. Clerkin, M. Yuzefpolskaya, R. Te-Frey, A. Kirtane, D. Karpaliotis, Y. Naka, P.C. Colombo, A.R. Garan.

Predictors of Mortality in Cardiogenic Shock Patients Treated with Extra-Corporeal Cardiopulmonary Resuscitation, S.J. Stein, H. Takayama, A.R. Garan, V.K. Topkara, M. Salna, J. Han, P.A. Kurlansky, M. Yuzefpolskaya, M.A. Farr, P.C. Colombo, Y. Naka, K. Takeda.

Effect of Arterial Cannulation Site on Cerebral Blood Flow During Peripheral Venoarterial Extracorporeal Membrane Oxygenation, H. Ikegami, J. Z. Willey, D. Yoshioka, P.A. Kurlansky, A.R. Garan, V.K. Topkara, M. Yuzefpolskaya, H. Takayama, P.C. Colombo, Y. Naka, K. Takeda.

Dose-Dependent Association Between Amiodarone and Primary Graft Dysfunction in Heart Transplantation, M. Wright, K. Takeda, C. Mauro, D. Jennings, P. Kurlansky, J. Han, L. Truby, S. Stein, V. Topkara, A.R. Garan, M. Yuzefpolskaya, P. Colombo, Y. Naka, M. Farr, H. Takayama.

The Short-to-Shield Phenomenon in Heartmate II Left Ventricular Assist Devices: A Single Center Experience, H. Ilias Basha, R.C. Givens, B. Cagliostro, G. Parkins, M. Flannery, R. Te-Frey, A.R. Garan, M. Yuzefpolskaya, H. Takayama, K. Takeda, Y. Naka, M.A. Farr, P.C. Colombo, V.K. Topkara.

Circadian Variation in Hemodynamics and Device Parameters in HeartMate II, Patients A. Pinsino, F. Castagna, E. J. Stöhr, B. McDonnell, M. Yuzefpolskaya, A. Clemons, M. Tiburcio, M. Pineda, K. Ross, V.K. Topkara, A.R. Garan, H. Takayama, K. Takeda, Y. Naka, J. Cockcroft, P. C. Colombo.

Concomitant Tricuspid Valve Replacement with a Continuous-Flow Left Ventricular Assist Device in Patients with Severe Tricuspid Regurgitation and Marginal Right Ventricular Function, K. Takeda, H. Takayama, J. Han, A.R. Garan, V.K. Topkara, P. Kurlansky, M. Yuzefpolskaya, M.A. Farr, P.C. Colombo, Y. Naka.

Use of Abciximab and Heparin Can Safely Facilitate LVAD Implantation in Patients with Heparin-Induced Thrombocytopenia, C. Lee, P.C. Colombo, D. Jennings, J. Han, M.P. Salna, M.A. Wright, K. Takeda, P.A. Kurlansky, M. Yuzefpolskaya, A.R. Garan, C. Chan, Y. Naka, H. Takayama.

A Case Study of LVAD Withdrawal in an Ambulatory Patient, S. Nakagawa, P.C. Colombo, Y. Naka, C.D. Blinderman.

Management Challenges for 'Crash and Burn' Patients: 'Shock Team' Approach to MCS, H. Takayama.

Publications

Kalfa D, Kasmi L, Geronikola N, Calderon J, Lambert V, Beili E, Bonnet D, Montreuil

M. Cognitive outcomes and health-related quality of life in adults two decades after the arterial switch operation for transposition of the great arteries. *J Thorac Cardiovasc Surg* 2017.

[Journal link](#)

Salna M, Khalique OK, Chiu Z, Kurlansky P, Borger MA, Hahn RT, Leon MB, Smith CR, Kodali SK, George I. Impact of small prosthesis size on transcatheter or surgical aortic valve replacement outcomes. *Catheter Cardiovasc Interv*.2017. Epub ahead of publication; doi: 10.1002/ccd.27120.

[Journal link](#)

Stephens EH, Walters DM, Eilers AL, Tchantchaleishvili V, Goldstone AB, Gillaspie EA, Fiedler A, LaPar DJ. Variability in Integrated Cardiothoracic Training Program Curriculum. *Ann Thorac Surg*. 2017 Apr 24. pii: S0003-4975(17)30193-5. doi: 10.1016/j.athoracsur.2017.01.079. [Epub ahead of print]

[Journal link](#)

[PubMed link](#)

Welch D, Randers-Pehrson G, Spotnitz HM, Brenner DJ. Unlaminated gafchromic EBT3 film for ultraviolet radiation monitoring. *Radiat Prot Dosimetry*. 2017 Feb 27:1-6. doi: 10.1093/rpd/ncx016. [Epub ahead of print]

[Journal link](#)

[PubMed link](#)

GI/ENDOCRINE

Presentations

SAGES 2017

Houston, TX, March 2017

Kluger MD. Irreversible Electroporation for Pancreatic Cancer: Trick or Treat? AHPBA Joint Panel: Contemporary Themes in Minimally Invasive Pancreatic Surgery.

American Association of Endocrine Surgeons 38th Annual Meeting

Orlando, April 2-4, 2017

Chen SY, Fruchter S, Chabot JA, Lee JL, Kuo JH. End-Stage Renal Disease Patients Have a Higher Incidence of Thyroid Cancer: A Systematic Review and Meta-Analysis.

McManus C, Kuo JH, Chabot JA, Lee JL. Four-dimensional computed tomography (4D-CT) is sufficient to guide a focused parathyroidectomy among patients with primary hyperparathyroidism: a comparison of 4D-CT, single photon emission computed tomography (MIBI-SPECT/CT), and simultaneous 4D-CT-MIBI-SPECT/CT

combined.

Khokar MT, Krishnamoorthy V, Chabot JA, Lee JA, Kuo JH. Use of Ultrasound and Fine Needle Aspiration by Endocrine Surgeons: An Analysis of the CMS-PUF Database.

PEDIATRIC SURGERY

Presentations

CUMC

April 19-22, 2017

Krikhely A and Zitsman J, Faculty. Obesity: Etiology, Prevention and Treatment.